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Algebra II Delta & Eta

Quiz 2 Unit III  
Simplifying Radical Expressions  
January 27, 2015

Name: Mr. Davis Solutions

Simplify each expression. Give each answer without negative exponents.

2pts 1.  $\sqrt{144y^2} = 12|y|$

2pts 2.  $\sqrt{72m^3} = \sqrt{36 \cdot 2 \cdot m^2 \cdot m}$   
 $= 6|m|\sqrt{2m}$

5pts 3.  $\sqrt{700w^6y^5}$   
 $\sqrt{100 \cdot 7w^6y^4 \cdot y}$   
 $10w^3y^2\sqrt{7y}$

3pts 4.  $\sqrt[3]{64x^3y^9} = 4xy^3$

3pts 5.  $\sqrt{3xy^3} \sqrt{27xy}$   
 $\sqrt{81x^2y^4}$   
 $9|x|y^2$

5pts 6.  $\sqrt{2x^5y^6} \sqrt{50x^3y^5}$   
 $\sqrt{100x^8y^{11}}$   
 $\sqrt{100x^8y^{10} \cdot y}$   
 $10x^4y^5\sqrt{y}$

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4pts 7.  $\sqrt[3]{2x^2y^4} \sqrt[3]{20x^2y^4}$   
 $\sqrt[3]{40x^4y^8}$   
 $\sqrt[3]{8 \cdot 5x^3 \cdot x \cdot y^6 \cdot y^2}$   
 $2xy^2 \sqrt[3]{5xy^2}$

2pts 8.  $\frac{\sqrt{32}}{\sqrt{2}} = \sqrt{16} = 4$

3pts 9.  $\frac{\sqrt{54x^3}}{\sqrt{6x}} = \sqrt{9x^2} = 3|x|$

3pts 10.  $\frac{\sqrt[3]{54y^{14}}}{\sqrt[3]{3y^2}} = \sqrt[3]{18y^{12}}$   
 $= \sqrt[3]{18y^{12}}$   
 $= y^4 \sqrt[3]{18}$

2pts 11.  $3\sqrt{5} + 2\sqrt{10} + 4\sqrt{5}$   
 $7\sqrt{5} + 2\sqrt{10}$

3pts 12.  $11\sqrt{3} + 5\sqrt{12} - 2\sqrt{48}$   
 $11\sqrt{3} + 5\sqrt{4 \cdot 3} - 2\sqrt{16 \cdot 3}$   
 $11\sqrt{3} + 10\sqrt{3} - 8\sqrt{3}$   
 $13\sqrt{3}$